



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,089	09/17/2003	Hiroyuki Sekiguchi	03886/0200058-US0	3720
7278	7590	05/02/2007	EXAMINER	
DARBY & DARBY P.C.			MANCHO, RONNIE M	
P. O. BOX 5257			ART UNIT	PAPER NUMBER
NEW YORK, NY 10150-5257			3663	
			MAIL DATE	DELIVERY MODE
			05/02/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/664,089

Applicant(s)

SEKIGUCHI, HIROYUKI

Examiner

Ronnie Mancho

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2/7/07.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-28 is/are pending in the application.
- 4a) Of the above claim(s) 15-19, 25-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-14 and 20-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of species (A) corresponding to claims 11-14, 20-24 in the reply filed on 2/7/07 is acknowledged.
2. Claims 15-19, 25-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected, elected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11-2-06.

Claims 11-14, 20-24 are pending.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 11-14, 20-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

5. In claim 11, it is not clear what all is meant and encompassed by "judging whether the preceding vehicle will deviate", "possibility that the preceding vehicle will deviate". Applicant did not provide a criterion or standard for establishing a possibility of deviation or standard for judging whether the preceding vehicle will deviate

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 3663

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 11-14, 20-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 11, it is not clear what all is meant and encompassed by “which is”. It is not clear what “which is” is referring to. It is further not clear what all is meant by “there is a possibility” as recited in the claims. The metes and bounds of the limitation are not clear.

In claim 21, it is not clear what all is meant and encompassed by “estimating a final travel path for the own vehicle on a road ahead”. The phrase final path is indefinite because if it is final then the own vehicle will not travel that path again at least since it is final as disclosed in the invention. The phrase “the respective coordinates of the preceding vehicle and the travel path of the own vehicle is less than a predetermined value” is further not clear. It is not known what applicant means by coordinates of a preceding vehicle, etc are less than a predetermined value. It is therefore not clear what all is meant and encompassed by “if the fourth means calculates that the respective coordinates of the preceding vehicle and the travel path of the own vehicle is less than a predetermined value, then a judgment counter TIME is initialized according to a position of the preceding vehicle, as well as a position of any detected solid objects other than the preceding vehicle”. The limitations just run into one another and confuse the scope of the claim.

In claim 22, it is not clear what all is meant and encompassed by “the final travel path and a previous final travel path calculated prior to calculating the current final travel path”. If a

Art Unit: 3663

path is final then why is a new path estimated, wherein the new path is now called the final path.

The limitations are confusing and therefore confuse the scope of the claims.

In claim 23, it is not clear what all is meant and encompassed by the limitations “first judgment counter setting means for setting a judgment counter in response to a distance in the traveling direction between the preceding vehicle and the own vehicle and a state of deviation of the preceding vehicle from the traveling path of the own vehicle, in a case where the preceding vehicle has been recognized, in order to judge the evacuation of the preceding vehicle; judgment counter correcting means for correcting the judgment counter towards an evacuation side as the preceding vehicle in a case where any forward-traveling object other than the preceding vehicle has been judged”. Limitations such as “setting a judgment counter in response to...”, “state of deviation”, etc are indefinite. How does one “set a judgment counter” as disclosed in the invention? The limitations just run into one another and confuse the scope of the claim. It is not clear what protection applicant is seeking. The rejections apply to the other claims with similar deficiencies. The rest of the claims are rejected for depending on a rejected base claim.

In claims 23, 24, it is not clear what all is meant and encompassed by the limitation “judges evacuation”, “synthesizes ....path”. The limitations are indefinite. The rejection applies to claims having similar deficiencies.

MPEP 2173. Claims Must Particularly Point Out and Distinctly Claim the Invention. The primary purpose of this requirement of definiteness of claim language is to ensure that the scope of the claims is clear so the public is informed of the boundaries of what constitutes infringement of the patent. A secondary purpose is to provide a clear measure of what applicants regard as the invention so that it can be determined whether the claimed invention meets all the

Art Unit: 3663

criteria for patentability and whether the specification meets the criteria of 35 U.S.C. 112, first paragraph with respect to the claimed invention.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 11-14, 20-24 rejected under 35 U.S.C. 102(b) as being anticipated by Saneyoshi et al (6122597).

Regarding claim 11, Saneyoshi et al. (abstract, figs. 1, 2, 4-14; cols. 2-9) disclose a vehicle surroundings monitoring apparatus comprising:

(a) first means (fig. 12, col. 8, line 50-55) for detecting at least solid object information ahead of an own vehicle;

(b) second means (fig. 12, col. 8, line 50-55) for recognizing a preceding vehicle traveling in front of the own vehicle based on the solid object information;

(c) third means (figs. 6, 7, 12, 13; col. 3, lines 11-49) for estimating a travel path for the own vehicle on a road ahead; and

(d) fourth means (figs. 6, 7, 12, 13; col. 3, lines 11-49) for judging whether the preceding vehicle will deviate (col. 5, lines 5-41; col. 8, lines 12-43) from a state of being in a preceding position relative to the own vehicle based on the position of the preceding vehicle relative to the own vehicle and based on coordinates of the travel path for the own vehicle, as well as based on

Art Unit: 3663

information of a solid object other than the preceding vehicle itself and which is in vicinity of the preceding vehicle, wherein if the fourth means determines that there is a possibility that the preceding vehicle will deviate from the state of being in the preceding position relative to the own vehicle, a signal is generated (see deviation frequency histogram, cols 5, 8).

Regarding claim 12, Saneyoshi et al. (abstract, figs. 1, 2, 4-14; cols. 2-9) disclose the vehicle surroundings monitoring apparatus according to claim 11, wherein the first means detects road information ahead of the own vehicle in addition to the detected solid object information and detects a traveling condition of the own vehicle, and the third means estimates a new travel path of the own vehicle based on a first travel path of the own vehicle which is estimated based on the road information and based on a second travel path that is estimated based on the traveling condition of the own vehicle.

Regarding claim 13, Saneyoshi et al. (abstract, figs. 1, 2, 4-14; cols. 2-9) disclose the vehicle surrounding monitoring apparatus according to claim 12, wherein the first travel path is obtained based on lane markers and side walls and the second travel path is obtained based on yaw rates of the own vehicle (figs. 6, 7, 12, 13).14.

Regarding claim 14, Saneyoshi et al. (abstract, figs. 1, 2, 4-14; cols. 2-9) disclose the vehicle surroundings monitoring apparatus according to claim 11, wherein the fourth means judges the deviation possibility according to a frontal distance of the preceding vehicle from the own vehicle and a separation of the preceding vehicle from the travel path of the own vehicle (cols. 5, 8; figs. 6, 7, 12, 13).

Regarding claim 20, Saneyoshi et al. (abstract, figs. 1, 2, 4-14; cols. 2-9) disclose a traveling control system for controlling travel of an own vehicle comprising:

Art Unit: 3663

a travel control unit ( 30, fig. 1); and

the vehicle surroundings monitoring apparatus according to claim 11; wherein the system is configured to operate in a constant speed control mode where the own vehicle travels at a speed inputted by a driver and a follow-up control mode where the own vehicle travels at a speed targeted to a speed of the preceding vehicle with a constant inter vehicle distance to the preceding vehicle being maintained (figs. 2, 5, 9-13; col. 2, lines 54-61).

Regarding claim 21, Saneyoshi et al. (abstract, figs. 1, 2, 4-14; cols. 2-9) disclose a vehicle surroundings monitoring apparatus comprising:

(a) first means (fig. 12, col. 8, line 50-55) for detecting at least solid object information ahead of an own vehicle, wherein the solid objects are classified as being one of a still object, a forward moving object and a backward moving object;

(b) second means (fig. 12, col. 8, line 50-55) for recognizing a preceding vehicle traveling in front of the own vehicle based on the solid object information;

(c) third means (figs. 6, 7, 12, 13; col. 3, lines 11-49) for estimating a final travel path for the own vehicle on a road ahead, wherein the third means estimates the final travel path based on a first travel path that is calculated based on solid objects that define the road ahead and a second travel path that is based on yaw rates of the own vehicle (figs. 4, 5); and

(d) fourth means (figs. 6, 7, 12, 13; col. 3, lines 11-49) for judging a possibility that the preceding vehicle will deviate (col. 5, lines 5-41; col. 8, lines 12-43) from a state of being in a preceding position relative to the own vehicle based on relative position of the preceding vehicle and coordinates of the final travel path (fig. 13) of the own vehicle, and if the fourth means calculates that the respective coordinates of the preceding vehicle and the travel path of the own



Art Unit: 3663

vehicle is less than a predetermined value, then a judgment counter TIME (see frequency histogram, fig. 13) is initialized according to a position of the preceding vehicle, as well as a position of any detected solid objects other than the preceding vehicle, the fourth means comparing the judgment counter TIME with a threshold value and if the judgment counter TIME is greater than the threshold value, then the fourth means generates a signal to indicate that there is a possibility that the preceding vehicle will deviate from its position as being in the preceding vehicle state (fig. 13).

Regarding claim 22, Saneyoshi et al. (abstract, figs. 1, 2, 4-14; cols. 2-9) disclose the vehicle surroundings monitoring apparatus according to claim 11, wherein if the fourth means judges that there is no possibility of deviation of the preceding vehicle, then the fourth means judges whether a turn signal switch is on and in the case where it is judges that the turn signal switch is not on, the fourth means then compares whether a steering wheel angle is greater than a threshold value and if not, the fourth means calculates a present travel path of the own vehicle based on the final travel path and a previous final travel path calculated prior to calculating the current final travel path (fig. 6, 7, 12, 13).

Regarding claim 23, Saneyoshi et al. (abstract, figs. 1, 2, 4-14; cols. 2-9) disclose a vehicle surroundings monitoring apparatus comprising:

frontal information detecting means (fig. 12, col. 8, line 50-55) for detecting at least solid object information ahead of an own vehicle;

traveling path estimating means (figs. 6, 7, 12, 13; col. 3, lines 11-49) for estimating a traveling path of the own vehicle;

Art Unit: 3663

preceding vehicle recognizing means (figs. 12, 13; col. 8, line 50-55) for recognizing a preceding vehicle traveling in front of the own vehicle based on the solid object information;

forward-traveling object judging means (figs. 12, 13 14; col. 8, line 50-55) for judging whether there is any forward traveling object, which travels in the same direction as the own vehicle, other than the preceding vehicle based on the solid object information;

first judgment counter setting means (see frequency histogram, fig. 13) for setting a judgment counter in response to a distance in the traveling direction between the preceding vehicle and the own vehicle and a state of deviation of the preceding vehicle from the traveling path of the own vehicle (figs. 12, 13; col. 8, line 50-55), in a case where the preceding vehicle has been recognized, in order to judge the evacuation of the preceding vehicle;

judgment counter (see frequency histogram, figs. 13, 14) correcting means for correcting the judgment counter towards an evacuation side as the preceding vehicle in a case where any forward-traveling object other than the preceding vehicle has been judged; and

preceding vehicle evacuation judging means for comparing the corrected judgment counter value and a preset value (see frequency histogram, fig. 13; col. 5, lines 23-55; col. 8, lines 11-56) to judge the evacuation of the preceding vehicle.

Regarding claim 24, Saneyoshi et al. (abstract, figs. 1, 2, 4-14; cols. 2-9) disclose the vehicle surroundings monitoring apparatus according to claim 23, wherein the frontal information detecting means detects road information ahead of the own vehicle in addition to the solid object information (figs. 13, 14), and the traveling path estimating means

estimates the traveling path of the own vehicle based on the road information as a first traveling path of the own vehicle, estimates the traveling path of the own vehicle based on a yaw

Art Unit: 3663

rate of the own vehicle as a second traveling path of the own vehicle, and estimates a third traveling path of the own vehicle by synthesizing the first traveling path of the own vehicle and the second traveling path of the own vehicle (figs. 12-14).

### *Response to Arguments*

10. Applicant's arguments filed 6/1/06 have been fully considered but they are not persuasive.

The applicant has amended the claims citing that the 112 rejections have been overcome. On the other hand, the applicant is just switching from one word to the other for example "judging" has been changed to "judges"; "high" to "greater"; "low" to "less", etc. These changes have not changed the scope of the claims. Thus the rejection stands.

The applicant further argues the claims have been written in "means plus function format". While it is appreciated that correction have been made, it is noted that most of the claims have been written in proper "means plus function format", but claims 23, 24, are not in proper "means plus function format" because of too much recitation of the structure or acts that performs the action e.g. "traveling path estimation means for estimating a traveling path". A suggestion for a proper recitation should be "means for estimating a traveling path".

11. Applicant's arguments with respect to claims 11-14, 20-24 have been considered but are moot in view of the new ground(s) of rejection based on a new prior art. It is noted that arguments drawn to 15-19, 25-28 are moot since these claims have been withdrawn.

MPEP 2114 [R-1] *Apparatus and Article Claims — Functional Language*

Art Unit: 3663

For a discussion of case law which provides guidance in interpreting the functional portion of means-plus-function limitations see MPEP § 2181 - § 2186.

APPARATUS CLAIMS MUST BE STRUCTU-RALLY DISTINGUISHABLE  
FROM THE PRIOR ART

>While features of an apparatus may be recited either structurally or functionally, claims<directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. >In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also In re Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971);< In re Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

MANNER OF OPERATING THE DEVICE DOES NOT DIFFERENTIATE  
APPARATUS CLAIM FROM THE PRIOR ART

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Exparte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (The preamble of claim1 recited that the apparatus was "for mixing flowing developer material" and the body of the claim recited "means for mixing ..., said mixing means being stationary and completely submerged in the developer

Art Unit: 3663

material". The claim was rejected over a reference which taught all the structural limitations of the claim for the intended use of mixing flowing developer. However, the mixer was only partially submerged in the developer material. The Board held that the amount of submersion is immaterial to the structure of the mixer and thus the claim was properly rejected.).

Applicant's arguments are drawn to limitations that have 112 issues. The 112 issues need to be cleared.

It is believed that the rejections are proper and stand.

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

*Communication*

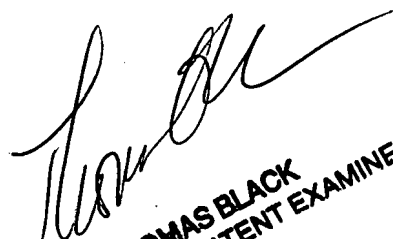
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 571-272-6984. The examiner can normally be reached on Mon-Thurs: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ronnie Mancho  
Examiner  
Art Unit 3663

4/19/07

  
THOMAS BLACK  
SUPERVISORY PATENT EXAMINER